

CLAIMS

What is claimed is:

1. A self-energizing brake assembly comprising:
a support pivotally mounted at an angle relative to a rotatable brake member;
and
a brake pad movable along said support between engaged and disengaged positions with said rotatable brake member to generate a braking force between said brake pad and said rotatable brake member.
2. The assembly as recited in claim 1, wherein said brake pad comprises a wedge and a friction element pivotally mounted to said wedge.
3. The assembly as recited in claim 2, wherein engagement between said friction element and said rotatable brake member drives said brake pad along said support toward said rotatable brake element to increase braking force.
4. The assembly as recited in claim 1, comprising an adjustable member biasing said support toward said rotatable member.
5. The assembly as recited in claim 4, wherein said adjustable member comprises a compliant member.
6. The assembly as recited in claim 4, wherein said adjustable member comprises a linear actuator.
7. The assembly as recited in claim 1, comprising a release spring to bias said brake pad in a direction opposing rotation of said rotatable brake member.

8. The assembly as recited in claim 1, comprising a drive actuator to apply a force to said brake pad by decreasing said angle between said rotatable brake member and said support.

9. The assembly as recited in claim 8, comprising a release actuator to move said support to adjust said angle between said rotatable brake member and said support.

10. The assembly as recited in claim 9, wherein said drive actuator includes a drive link pivotally attached to said support, and said release actuator includes a release link, said release link and drive link including an interconnection such that actuation of said release link moves said drive link to increase said angle.

11. The assembly as recited in claim 10, wherein said interconnection comprises corresponding ramped surfaces on said drive link and said release link to move said drive link transversely relative to movement of said release link.

12. The assembly as recited in claim 1, wherein said brake pad contacts an outer perimeter of said rotatable member.

13. The assembly as recited in claim 1, wherein said brake pad contacts planar surfaces of said rotatable brake member.

14. A method of controlling braking force gain created by a self-energizing brake assembly comprising the steps of:

- a.) supporting a brake pad relative to a rotatable brake member; and
- b.) changing a distance of said support relative to said rotatable member in response to a predetermined gain in braking force.

15. The method as recited in claim 14, wherein said step a.) comprises slidably supporting the brake pad at an angle relative to the rotatable member, and varying said angle relative to the braking force.

16. The method as recited in claim 14, comprising biasing the brake pad in a direction counter to rotation of the rotatable brake member.

17. The method as recited in claim 14, comprising biasing the brake pad toward engagement with the rotatable brake member with an adjustable member, and moving the adjustable member in proportion to the braking force.

18. The method as recited in claim 14, wherein said step b.) comprises moving the brake pad away from the rotatable brake member in response to a predetermined magnitude of gain in braking force.